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(84) Hage with plactin testaners and method of manufacturing the same Boutel mit Verschäuse aus Kunststoff und Verfahren zu dessen Herstellung Esce avec termeture en matière plactique et procécté de tebrication de calle-ci

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· PATENT ABSTRACTS OF JAPAN VOL 088, no.

Ool, 39 June 1986 & JP CO CLARCE A GREISAN NPPONENA ICC, 6 February 1994, PATENT ABSTRACTS OF LAPAN vol. 017, no. 439 (MH463), 12 August 1883 & JP CO 097161 A (CEESAN NPPONENA KIQ, 20 April 1993,

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Description

BACKGROUND OF THE INVENTION

[Field of the breaten]

(UDD1) This transition relates as beg provided with a enger-fit type synthetic resin reclassible factories (horninstant rate red to as tastened and formed by burnding get et i e epient ert othi bedd stassug ebie i the bag to show a Vehape cases section to the islamit sides of the bac.

(Prior Arg

[9932] A bag provided with a anap-fit type synthetic reach featener used formed by berading a pair of side guasome fundad and and to entern one and better also cross section to the leasing alree of the bag is typically brown from Japanese Peters Application Laid-Open No. 5-97151.

[COOS] With such a known beg provided with a ensp fit type synthetic reain fasterier and formed by banding a pair of side guessta to the fateral aldos of bag, the side guessis are co-dimensioned that the upper adges of the side guessis are located below the testener and the open upper edges of the side guessie are bonded and cocted in such a way that the beg can adventegoously

be fully exerted 61 the spaning.

[DUCK] However, the edvermage of the beg can be uti-Sized only at the opening end the vicinity, in other words, when the beg is opened, the opening localed above the tattens: can be made very large but the upper edges of the side guests are projecting into the opening and interitors with any citismet to amountly fill the bog of takes the contents out of the bag. The above known bag to distinct to make the upper edges of the skin guessta the sease of an ambidoug ship distralls of linner that

cepacity of the bay.
[2006] Jepanese Peters, Application Leis-Open No.
1-14103 filed by the supplicant of the present patent appiloation discloses a similar bag trying with a certain extors of evecess to provide the beg with a large capeally. However, again, the upper edges and their vicinity of the sido guasora con naverinaless interiore with any etternot to use the bag so that, in some payee, sustained thek be bond the upper edges of the side guessets to the limer surface of the bag after purchases.

(2000) Japanese Patent Application Laid-Open No. 8-84450 maches a bag designed to increses the capac-By eard, at the earne time, ensure that the upper edges of the alde gusacte do not interfere with attempts to use the born conveniently. However, the disclosed best uses independent spelling topes for bonding the festioner and the upper exigus of the also guessets separately, thus making the munufacturing process rather cumbersome

[DAD7] In VIEW of the above altrumptaneous, it is there-

gad a object of transmit inecate out to tacke no enot equipped with a snap-fit type synthetic ream testener and formed by bonding a pair of side guseste to the bab end sides of the bag that allows or hilly utilized a wide opening, provides a large capacity and, at the care time, the upper edges of the cids guescia do not litterters with any amount to full the bea or take out the con-Takits transform emouthly, it is another object of the present invention to provide a memoral or manufacturing and to require behaviors a title events banish as ged a pononto that is less combersome and tess costly but highly efficient,

[DOUR] According to an accord of the invention. The

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first object of the invention is esthicated by providing a beg provided with a unap-fit type synthetic resin last anar and formed by bonding a pair of sixta guscots totaled into the traite of the bag to chow a Wahilped cross continu to the lateral sides of a mort film member and a rear film member of the bug, wherein the front and rear tim members have respective thermouths live final layers and the pair of alde gussets have respective inner terrors Promiting achiestve relegive to the limit buying of the film mambers and are related with the outer surface facing halds to show a Vahaped cross costion, the upper edg-AN OF SAID SIDE THEORY BENEAT STREET, BENEAU BAS THE PER SAID face of olther one of the front and rear film members by meens of one of a pair of scaling tapes having thermili blas to energy ramin entli of evitates escribboth members and the those of the side gustate, characterized in that the tapes are provided respectively with a sent app the serie with a silong elem a bins silong than-

(0000) Preferably, in a bag according to the Invention. sald easing tapes with a fautener have a multipler structure of reein invers with dillorant making points. (0010) Preferably, in a bag provided with a enap-fit type synthetic reain material accounting to the invention, eals also guasers are so dimensioned that the uppor edges of 438 348 guessis are bonded to the corresponding the mamber at positions located below and preferably immediately adjacent the fastener on the Seeling Disco.

[DDIT] Alternatively, in a bag provided with a snap-lit type eynfields (Bain (Batener eccording to the invention, edid aide guesete ere on dimonalaned that the upper edges of each olde gussate are bonded to the corresponding this manuar at positions because above and prelamine immediately adjacent the testener on the easing tapes.

8 [0012] According to another aspect of the invamion, the second object of the invention is echieved by pro-viding a method of manufacturing a beg as defined above, elementated in that it comprises stape of: un-rolling a rall of film for the film members having a timemeacheave layer and producing a pair of vertically expensed film matching with said thermodificalive layers facing each other, unrolling a roll of paired scaling tapes provided respectively with a temple profile and a male

tener.

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profile of a exceptifit type features, said terrain profile and estid maile profile burne engaged with each other, dizergarging the terms to profile and the mate profile and make leteres ni bete necessed nur exqui getiess betieg ent pel with the varically separated film mambers; inserting a - # pair of cide guessia tolded to show a V-shaped cross section between one of the film members and the conresponding one of the sociling tapes in a direction per-pendicular to the running direction of the film manifests; Suffering positionally the upper edges of the inserted to side guessia relative to the fautener on the sealing leaves and bonding them to the corresponding film member by means of the related dealing tape, while bounding, at the same time, the side gussem, the base sections of the easing tapes and the film members together, and outting the top, the bottom and the lateral sides of the fun mandate to predictamined dimensions of the bag.

. • BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIB, 1 is a partly out-away achomosis front view of an embodiment of tray according to the invention, (pot 4) FIG. 2 is a schematic parapactive view of the embediment of FIG. 1 in its expectated condition.

(0015) P.G. 9 is an enlarged schematic orace cocilianal view of the embediment of FIG. 1 pales grong time B-B. [GO16] FIG. 4 is an enlarged echematic cross sectionel view of the embediment of FIG. 1 taken along line C-

[0017] FIG. 5 is an entarged schematic cross sectional ylew of the embodiment of FRS. I taken along line D-

[0018] FIG. 6 is an entarged schematic cross section B-B and groups reaked 1 DIFF to mentiocoline entities will be the [VOIS] FIG. 7 is an ordanged schematic cross sectional view of the embodiment of FIG. 1 tales along line F-R (1020) FIG. 8 is an aniarged behometic erone section el view of the embed ment of FIG. 1 taken Along line G-

[0021] FIG. 9 is an enlarged schematic cross section-al view of an embodiment obtained by modifying the embodiment of FIG. B.

(D023) Fig. 10 is an enlarged echomatic cross each Your view of another embediment obtained by modifying the enthodiment of FIG. B.

[0023] Fig. 11 is a partly cut-every echematic trant view of enother embodiment of trap according to the in-

[0024] FIG. 12 iz on anlarged (chametic cross casilonal view of the ambodyment of FIG. 11 taken elong MA A-A

[CD25] FIG. 19 is 6th embraced achievatic cross 466 Some view of the embodiment of FIG. 11 taken glong One B-EL

[0028] FIG. 14 is an enlarged schamatic cross sec-tional view at the embedment of FIG. 11 laken along 11no C-C.

[DD27] FIG. 15 is an enlarged schemolic from sec-

tional view of the ambodiment of FIG. 11 faloin along Dire D-O.

[0028] FIG. 16 is an anitarged suframatio erects eacfloral view of the embodiment of FIG. 11 taken along END E.F.

[P029] FIG. 17 b an enlarged achematic cross sectional view of the embeddment of FIG. 11 Mann alone the F-R

[0000] Fro. 18 is an enterged schematic cross asetional view of the embediment of FIG. 11 taken along M G-A.

[0031] FIG. 19 is an enlarged echamatic cross septional view of the embodiment of FIG. 11 taken along Down H-H.

[DESC] FIG. 20 is a exhamatic front view of yet another embedment of the invention.

[DOSS] FIG. 81 to a surhamental front view of yet another embodiment of the laveration.

(DC34) FIG. 22 is a schematic from View of yet enotice embodiment of the invention,

[3022] Fig. G. 23 is sechemed; side view of amethod of Manufacturing a bay according to the invention, showing he principal areas.
[D056] FIG. 24 is a cohematic plan view of the identity.

Gon of Fig. 23.

DETAILED DESCRIPTION OF THE PREFERRED **EMBODIMENTS**

[0037] Nove the present invertion will be described in greater detail by referring to the excompanying drawings that Divinate preferred embeddments of the invention. Patering first to FIGB. 1, 2, 11, 12, 20, 21 and 22, a first embediment of buy zecording to the invention comprises a fruit fifth moment to and a rear film momber 1b, each of which comins a tharmoughoute main layer erranged on the brokes thereof. The beg also has en opening & a testioner 5 arranged along the opening 2 and a pair of ratches 7 arranged above the opposite ends of the opening 2 (or a notch 7 arranged above one of the opposite ends of the opening 2) in alignment with a crown line 6 minning above and in parallel with the instance 8 to facilities the operation of cutting the ban. Note that the cutting line 5 and the notwhee (or resen) 7

are provided only when necocolary. (DESS) Reference rumanal 4 denotes a pair of side guisacte whoes langr audiace to thermally achiestvo retsilve to thei of the film merebers 14 and 16 and each of which is folded between the film members to end th with the outer surface facing inside to show a V-chaped erose section. The upper edges 4b of the side guesets 4, 4 are therrisity actuality interior surface of the film mombons 1s and 1b and that of the aide gus-88th 4, 4 and banded to the inner stirtuce of other one of the film members ta and to by means of a sociling tupo 6 provided either with a female profile Se or with a

male profile 30 of a snap-fit type festioner 3. Note thes. for the case of description, the upper entree of the elds

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guasate are bonded to the farier surface of the front film member to by means of a sealing tape 8 provided with a familia peolita Six of a srespelit type testamen.

(19030) After bornsing the upper edges of the side gueasta to honer surface of the front film member to by means of a assting type B, each of the side avecte 4. 4 may misitionally be bended to the front lifth member to clong an oblique line 4d running from the upper odge 4ber a point close to and believ the fastener 3 to a point on the corresponding tatoral edge & of the front film 19

[0040] From an advantagoous manufacturing point of view, the front and roar film members 18 and 16, the elde gussets 4, 4 and the petred scaling tapes 8, 8 provided respectively with a formale profile and a male profile of enco-mype restoner are made of multileyer film having a configuration as described hereinafles. As thorn, lateralls, in FIGIS. 9 and 18, the front end resu film members to each the comprise an outer film layer title and an inner film layer 10b. Similarly, as shown partitularly in FIGS. 5 and 16, the side guesses 4, 4 comprise an outer film layer the and an imper film layer thb. [8041] The inner film layere 10b of the film mambers end the inner film layere 11b of the side puscession are leady made of a ream material that makes the linner film 45 keyons 10b and 10b and the inner film layers 10b, 10b and 11b, 11b the mally highly achesive relative to each other such as bow density polycotystems (herefreiter re-terned to as LOPE), polypropylane or allylene occipie viryleopolymer (herefreiter referred to as EVA), wherees the outer that layers 10a of the film marrisors and the outer film layers the of the olde gussets are typically made of a monetayer or multileyer material that does not become thormally anhealve under the condition where the limit film leyers 10b, 10b and 11b, 11b are 35 thermally bonded and is capable of endowing the beg with eartain dealerd properties including tharmal resistence, air tightness, a light ecretning effect, a flavour retaining effect and macharical etrength. Such a material may be extented from polycuter film (he refractor referred to se PST), polyconide, paper and aluminium toll.

today As though in FIGS, 8, 10, 12, 14 and 18, each of the payed coaling apper 8, 8 has a multileyer structure having a thermosphesive high-meding point bayer 8a typically made of streight-chain low density polyathyland (hereinallier referred to as LLDPE) on the elde where the rapes are to be held in contact with each other SAND IN AVE to etant ylerally de royal radione bas having a mailing point lower than that of the layer Ba and a good adheat/vences relative to the innerfilm layers 50 11b, 11b of the aids gussets 4, 4 and the breast film layer 10b of the front film member 1s.

[0042] Due to the feet that the trent and rear 6km mambers to end 1b, the side guisacts 4, 4 and the seeiing tapas 8. 6 with mambers of a featener have a multilayer structure, any two of them can be the maily bornied tocertier excellently at intended curtages areas under innded conditions, who may they are effectively prevent-

क्ष विकास इस्क्रीसर्पेग्य १० ६३६० स्वीतर हो सामू धार्मिकार्यक क्ष face cross under the conditions they are subjected to. For borating the related edges 4, 8 of the front and rear film morniburs together at areas where the layers Be, Be of the sauling topes G, 8 put to contact with each other, they will only have to be headed to the melting point of LLOPE.

В

Thus, when a crop-fit type festioner 9 is blood ome the inner surface of the tag 1 st the opening 2 sa shawn in PiGS, 8, 10, 12 and 14, the incomism byer 100 of the front film exember 10, the inner tim layers 11b. 11 b of the cide guessets 4, 4 and the layer 8b of the porresponding one of the paired spating tapes H, S are excollectly buried together this to the coordination in terms of the meaches/verses and the tact that each of the equiling topos 8 how layers Bu and 50 made at reepective thermosonosivo resin materials having different matting points.

goods) On this caltur heart, the layer film layer 100 of the rear film member 16 and the layer 80 of the correspanding one of the palled stelling topes 0, 8 are excelbilly bonded together due to the coordination in terms of thermouthestveness, whereas the layers 6e and 8e grice mont battevery eras 8. A sequiprisons boring only to banded to each other under the above banding conti tions. Thus, the paired sealing tapes 6, 8 provided with respective members of a textensy 8 can be fitted propgrimage out to 1 god out to ecotive reard out cane vite 2 so that the fastener 3 will not come off from the inner BITES beneap to totagini at betseighte al gast enti il essenue closed repeatedly. Note that L2 in FIGS. 1 and 11 de-

notes the total langth of the opening 2. [7046] As chann in FIGS. 6, 14 and 18, the inner film toper 1s of each of the side guests 4, 4 is thermally borned to the inner film layer (the of the trans film many ber 1s along the chique borneling the 4d-co (hat, when the bag 1 is filled with the contents to extend the aids guesets 4, 4 as alterny in FIG. 2, the oblique bonding lass 44, 44 alleviate the concentration of almost onto the upper edges 4b, 4b of the strin guesots 4, 4 bonded by one of the sealing tapes B, S. Bince the inner layers of the side guessits 4, 4 are thermally adhesive relative to The linner layers of the front and roar film mombers 1s. and 16 and the upper edges 46, 45 of the side guessia 4, 4 are bonded to either the fourt film member 12 or the may film member to by the corresponding one of the sseiing tapes 8, 6 provided respectively with the female profile So and the male profile So of the exap-fit type

\$ on the coaling tapes 8, 9 can be modified by selecting appropriate comparishing for the side guesses 4. 4. [D047] As shown in FIGS. 1 through 6, the side gue gate 4, 4 may be so dimensioned that the upper segan 40, 40 of the alide guissets 4, 4 ave located below the isstance is arranged on the coaling tapes 8, 6. Which the upper edges 45, 45 of the side glassets 4, 4 are focularl below the festimar 2 arranged on the coaling tapes 8,

tener & the positional relationship botwarn the upper

oddes 40, 40 of the side plusseds 4, 4 and the fastener

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B, the aide guessio 4, 4 are extended at positions remote from the festerior & with the upper edges 45, 40 located between them when the bag is filled with the contents. (0048) FIGS. 9 and 10 (bissiste embediments differand from the one whomin PiGG. 1 through 6, in Fig. 9, 8 this easiling tapes 6. 8 provided respectively with the famate profile 82 and the male profile 55 of the snap-fit type factors 3 have different heights. In FIG. 10, on the Other hand, the exacting tapes B, B are bonded to the large 1 differently. Note that, historier, the layered enrange-ment of the front and rear film mambers 18, 15, the elde

guesacts 4, 4 and the seasing tapes B, B provided with the of batters ton one ranging out to machinem evitogeor the above embodiments and may be modified appropriearly to optimize the usability of the bog.

[0045] Atlantity of section in FIGS, 11 involgs 22. the side guesses 4, 4 may be so dimensioned that the upper edges 46, 46 of the cide guesste 4, 4 are leasted above the fastener 3 emenged on the spaing tapes 6. 8 and bonce obser to the opening 2 of the bag 1 and then bonded to the inner surface of other the from film member to orthorear film member 1b. FISS. 11 through 20 shows an embodiment where the upper edges 4b, 4b of the side gussets 4, 4 am aligned with the upper edges of the film members to and the defining the opering 2 of the bag, whereas FIGS, 21 and 22 livetrate sevord different embodiments where the upper edges 45, 4b of the side guscets 4. 4 are also located above the texterer 8 erranged on the coaling tapes 6, 8.

(VOSO) When the upper stiges 45, 45 of the 8166 gla-sets 4, 4 are located above the fatterer 3 averaged on the appling topos & & the elds guessts 4, 4 can be made to become extended at positions close to the fasterer 3 in a well belonged manner to improve the appearance

(DOS1) The above differences in the extended state of the olds guesate reflect the fast that the extended state of the side guassets and home that of the pages a hale are defined by the positional relativeship between the upper edges of the side guaracte 4, 4 that are bonded to of brisish ensurement militiate to eno to eachus tenni enti by meens or contemperating one of the seeiing tapes 8, 8 and the fastoner I arranged on the cooling tapes. They pro put under chose expensioly 2 they are remain 1899 each other, whereas they are collectively and commonly put under stress if tray are located closer relative to each other. In other words, the upper edges 45, 45 of The side guessia 4, 4 are preferably arranged slose to the lestence 8 so that the side guessia 4, 4 may be se-R sensteat orti of each excitace is between

[DOS2] More specifically, the seeing tapes 6, 6 ere preferably bonded in areas located obove and close to the tectanor Statishings or totally eliminate the bonded ereas of the coaling tapes 5. B under the featurer 5. (a) though, the bonded ereas under the featurer 3 are not totally eliminated in any of the like trated embediments). [0080] If the upper edges 46, 46 of the side guasets 4, 4 are located below the fasterer 3, a well balanced

profile can be restricted for the bag by borneing the related scaling tape 8 by a longth sufficient to ensure the upper edges 4h, 4h of the side guesaris 4, 4 atright and less limby to become described.

[0054] Whitel the embediment of bay shown in Fig. 11 is designed to be filled through the opening 2 of the beg 1 of the top, PIG. 20 shows an embedment designed to be filled through the bottom 20 of the beg 1. in FIG. 20, reference symbols 6s and 6b denote rec lively the bottom area and the top area to be cooled after

[2065] The upper edges of the coaling tapes 6, 8 provided with a fastener are aligned with the opening 2 and The upper edges 4b, 4b of the side guessis 4, 4 in the embediments therein in FIGG. 11 Strough 80, Such as envergement obviouse the fink of the thick side guesers 4, 4 producing a pin hole or come other flow when the bag 1 is secret at the opening & Thire, the lang remains

DOSG: FIG. 21 shows an embediment where in the upper edges 45, 45 of the edde guaranta 4, 4 are located . above the fastanar 8 on the coaling tapes 8, 8 and below the opening 3 of the bag 1. With this exempement, the rego ert ta bekee el gad ett li triginis bled ad nas god big Bin such a way that the coaling effect is not effected

airticht and provides an agrecable gegestence.

filling the bear.

by the side guesco 4, 4. [9857] In the ambadiment of PIG. 82, the scaling tapes 8, 8 do not cover the upper edges of the side que ents 4, 4, eithough they do cover the effective upper edges 45, 45 of the side guasate 4, 4 that appear Whan the

east of the bag is opened by way of the notation 7, 7.
Therefore, the rist offect of this embediment will be prelically carrie as that of the preceding embediments.

[UCSS] In the lymen bay alted above and disclosed by the applicant of the present patent, the film members of the bag and the enap-fit type testaner are torned intogrally and the upper edges of the olds guarate are securely fitted to the inside of the bag by means of an independent seeing tap. Therefore, the snap-fit bere tastener and the expling tape have to be manufactured independently, pleased in position on the film mentions of the beg and then bonded firmly to the bag. Thus, the process of manufacturing the bag is reproreumbersome

and comp. (DOSS) To the contrary, with a bag according to the br-vertion, the sealing lapse 6, 8 for filmly holding the upper edges 45, 45 of the citie guestre 4, 4 to the inside of the bag are provided respectively with a ternale profile and a male profile of a enap-fit type fastener and therefore engressioned integrally as that the number of the components of the bog is reduced and the process of manufacturing the bag is considerably simplified to improve productivity and raduce manufacturing costs.

group With a method of manufacturing a beg of the type under consideration exceeding to the invention, a roll of film baring a thermoodheathe reals tayer ic unrolled to produce a pair of film members of the bag in betterages one executes mild beging our barty year a deute

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from each other with the thermoschuseins resin legers taking outh other, Referring to FIGS, 83 and 24 Mustreting a belimique that ean be used for the purpose of the invention, the roll of fine 20 having a transcentre-nach byer is unraised and felicide with the thermouthesive realn layer beated inside and out along the feld line by means of a cutting edge 22 to produce a pair of film members to end th.

[0081] Alternatively, a pair of film attembers 1s and 1b pray be produced by using a petr of reils of fibra. In this 19 case, the use of a fainter piste 21 and a cutiling cope 22 is not recessary. The mile may have a width adapted to The Sim mombers of the beg to be produced on alleme-threty. They may have a greater width so that a physilly of bogs may be produced chauteneously for the purpose of mass production,

[0082] The vertically espansied film mambers 12 and 16 are then moved away from each other by means of 1000 reliero. Miscrearillo, a ros er acamgitapas B, B p/ovided respectively with each put together through the engagement of femals Se and male profiles So of featurer is unreliadent the exaling rapes 6, 6 are-esparated from cash other by obengaging the formale and male profiles 2a and 2b. The cooling tapes are then made to run between and along the upper and lower film members to 48 and 1b respectively.

[DOGS] Then, a pair of cide guessia 4 felded to show B. Webspool cross eaction by mostes of 8 folder 23 and cut to given eliterations by a cutter 26 too inserted baregen the film members is and 15 and 865 between 99 the seeing tapes 6, 8 to a direction perpendicular to the number direction of the film members to and 15 and then the upper edges 6b, 4b of the also guesons 4, 4 ers in the super course we do or the sec guestill 4 4 the corresponding film marriar stret adjusting their positions relative to the totation 3 at on the seeing lapse 6, 8. Then, the upper edges 4b, 4b of the side guestill 4, 4 are county hold in position by means of a pair of spaling bars 269 and 250 and, at the same time, the eldo guessio 4, 4 and the bases of the scaling lapes 8. 8 are filmily bonded to the film marrisers 46 18 and th

[0064] Thereshal, the female profile 66 and the male profile So of the festioner are mests to angage with each ainer by angaging moone SZ and the top, the bottom and the laboral sides of the tim members he and the are bonded and cut to given dimensions to produce a final product of beg by using of known techniques.

(Advantages of the bryentled)

[0065]. As described above, with a bog provided with p anap-is type synthetic resin festans: according to the invention, the side guesote are bonded to the inner extage of alther one of the front and rear film members by means of one of a pair of seeking impage provided compositionly with a learning profile and a mailer profile and the arraytil type fastener und having thermouthestveness rela-Ove to the forur layers of said tilm members and the

Trace of the side guesate so that, when the bag is opened by discrepaging the locally prefile and the male profile of the tactioner, the bag is fully epened slong the proper opening of the bag and the combines can be taken out through the opening emocityly without any bearing-ence on the part of the Upper edges of the side guesses. [0060] Additionally, since the sealing tapes are real-ted as a single component and provided with a snapfit type testanor as an integral part thereof, the number of components of the bag is reduced and the menutac-or in this word of the integral of the content of the cont reduce manufacturing ocets. [DGG7] Furthermore, since the upper edges of side

guarante are firmly banded to the laner states of one of the film mambare by masks of the corresponding one of the seeing topos, the seeding top 20 bear subtractiony all of the street that the fastener is subjected to due to The preserve internally applied to the fatherer: thue, the testance to provented from disangagement, and dem-age. This effect of firm bonding is reinferred when each of the side guessts to additionally borned to the addocted fund film member along an oblique like twinting from the upper odge or a point etcor to and below the tamanor. to a point on the corresponding lateral edge of the film तासकोश्रद

[9868] If the coaling supes was a trustenor have a multlayer attuature of recir layers with different melling points, the essting tapes are prevented from astering to each other when they are bunded to the fibri mambers and the side cuesete so that consequently the testemen ors one spans bus memogagnesis mai beimvere d marufacturing process of the bag can be further simplifirst to improve productivity and rection manufacturing

tutt benolenaria on era coesse pida ert B [6900] task upper edges are bonded to the corresponding film member at positions located above the fastener on the ecoling topos, the side guarants can be made to become extended at positions close to the textoner in a well baianced manner to improve the appearance of the barg of the retail outlet. Additionally, the capacity of the bag is eignificantly improved because the side gussets can be accorded immediately under the testener.

TOTAL With the upper adgree of the side guestic adjust with the upper adgree of the side guestic adjust with the eparting of the bog, the felt of the filled cide guescia prochaing a pin hole or some other flaw when the tout 1 is sould at the opening is obvioud. Thus, the bee persoine nirtight and provides an agreecble separatanes.

[0071] Finely, the method of meauteduring a beginse been described, what is edicient and redveer marriasturing eceta.

Cinima

1. A bag provided with a shap-fil type synthetic resin testenar (a) and formed by harriding a pair of elde

PAGE 2014 * RCVD AT 1117/2005 11:44:42 AM [Eastern Standard Time] * SYRJUSPTO-EFXRF-1/3 * OXIS:8729305 * CSID:4432022570372 * OXIRATION (min-54): 10-32

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guseria (4) festiad into the holde of the begut ohow a V-chaped cross section to the letteral sides of a foot the term of the manufact (14) and a case the meeting (15) fith of the beg, wherein the frank (14) and case (15) fith members have respective fregmenthable inner is beyone (16) and the pair of side gussets (4) have respective inner tayone (16) premarily sufficience restricts to the inner layers (16) of the firm members (16, 16) and are to idea with the course surface tacing incide to chow a V-chaped cross section, the upper resides (4) of said also guseria (4) being bonded in the three resides (10) of either one of the frost and the firm members (18, 16) by means of one of a pair of seeling tapes (3) having the meadle function and the first part (16, 16) and the those (16) of said film manufact (16, 16) and the three types (9) are provided (4), characterized in the three types (9) are provided respectively with a termals profile (3a) and a male profile (3a) and a male

- A bag eccenting to claim 1, characterized in that ead coaling tapes (9) with a featener (3) have a mettiager structure of reain layers (8a,8b) with different melling points.
- A beg eccording to obtim 1 or 2, characterized in that sold side guseris (4) are so dimensioned that the upper edges (40) of each side guseris (4) are bonded to the corresponding film member (10,1b) as positions located below the factorer (5) on the examp tapes (8).
- 4. A beg according to claim 1 or 2, characterized in that said side guanate (4) are so dimensioned that the upper edges (4b) of said side gueette (4) are bended to the corresponding film marriser (1s, 1b) of positions located above the testaner (3) on the seating tapes (3).
- A beg according to claim 3 or claim 4, characterized 40 in that said practions at which the upper edges (45) of said side gurgets (4) pre bonded to the corresponding film member (16,16) are boated claim to said fundament (3).
- E. A malitud of manufacturing a bag as defined in any of claims 1 through 8, etasterisation in that it comprises etape of: unreding a roll of film (20) for the film mornious (1s, 1b) having a thermostrative by et (100) and producing a pair of west body expension film members (1s, 1b) with eald the mescathesis have on (100) lasting seets other; unreling a roll epolice can (100) lasting seets other; unreling as of a paired saaling tapes (3) provided interpretately with a 1s male profite (2a) end a male profite (3b) of a engaging traps (2d) being anguiged with each cities of disongoging the immale profite (3a) and the male profite (3b) and making the pointed sealing lapes (3)

run between and in paraliel with the vertically expensions from members (1e, 1b); bruering a pair of state guarate (4) tailed to phore V-dropped crose section or of the film members (1e, 1b) and the corresponding one of the seeking lapes (6) in a direction perpendicular to the running direction of the rection perpendicular to the running direction of the upper edges (40) of the breakled side pursuits (4) and the film members of the training them to the corresponding tim members (1a, 1b) by mission of the confuse sealing state (8), and (4), the basic couldons of the coulding tape (9) and the tim mumbers (1a, 1b) toperson; and curring the top, the better man the lateral eldes of the film members (1a, 1b) toperson; and curring the top, the better man the lateral eldes of the film members (1a, 1b) toperson; and curring the top, the better man the lateral eldes of the film members (1a, 1b) toperson; and curring the top, (1a, 1b) to production the directions of the size of the film members (1a, 1b) to production of directions of the size of the film members (1a, 1b) to production of directions of the size of the film members (1a, 1b) to production of directions of the size of the film members (1a, 1b) to production of directions of the size of the film members (1a, 1b) to production of directions of the size of the film members (1a, 1b) to product the directions of the size o

20 Patentansprüchs

- 1. Bestel, versehen må einem Kunsflerz-Echnappverschild (3) und gelbilds durch Vertinder einer
 Reame von Seiterfelben (4), die deret in die innerseite des Bestels gefehrt sind, daß sie den idlesslan Seiten eines verderen Föllenleits (1e) und eines
 hitteren Follenseits (1b) das Bestels einem V-förmiges Cucrechnis derfeleten, wichst die verderen (1e)
 und hitteren (1b) Follenteite entsprechende frammo-editärive innerschichten (100) und das Passt
 von Seitenfalten (4) entsprechende thermeterfisische Innerschichten (10) mistiv zu den tresen
 schletten (10) der Follenteite (1e. 1b) aufwelsen
 und mit der Euseren Oberfisische mech innen zeigend geselbt eind, so daß als einen V-förnigen
 Guntachtild derspilen, vecteit die oberen Katten
 (100) erhweder des Vorderen eder des hinderen Folante in (1e, 1b) verbunden sind, und zwer mittels
 eines von einem Pear Oberfisierter (3) mit deser
 Thorms-Aufwischelte reteit zu den hinder (1b) der Beiterfalten (4), desfücht geferonsichten (1b)
 das Esternfalten (4), desfücht geferonsichten Profit
 (3e) und einem nießen Profit (3b) des
 Beitrater (8) jeweils mit einem velbeiten Profit
 (3e) und einem nießenhe Profit (3b) des
 Seinspoprerechtusses (3) versehen sind.
- Seutei nuch Anspruch 1, <u>Betitteh gekenntgrichtet,</u>
 daß die Dichtbünder (B) mit einem Befestiger (3) eine Mehrisch-Schöder Streiber von Harzechlichten (St. die) mit unterschliedlichen Schmeispunkten zufweisen.

 Weisen
- 2. Beytel nach Anspruch 1 oder 2. <u>decturch gelenger</u>

 <u>anichnet,</u> daß die Seltenfelten (4) ee dimensioniert

 and, daß die charan Kanten (4) der Gallanfalten

 (4) mit den erdeprechenden Folianfelten (14, 16) an

 Positionen verteinden dind, die unter dem Ver-

PAGE 21/24 " ROYD AT 21/1/2005 11/44/42 AM (Eastern Standard Times)" SYR-USP TO-EFXNG-US" DHUS-8/20206" CSEU-M12/2025/10772" DURATION BROW-SEK 10-32

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schluß (3) an den Dichtbåndom (6) liegen.

- 4. Beutel nach Anaprech 1 oder 2, <u>dedunch tedenn-</u>
 zelchnis, daß die Seitenfeben (4) an dimensioniert
 eins, daß die oberen Konton (4b) der Beitenfehen 6
 (4) mit den entermeinerten Feltomeiten (1a, 1b) en
 Poeltionen verbunden and, die über dem Verschluß
 (3) an den Didribbindam (8) jiegem.
- Beufel hach Ampruch 3 oder Antipnuch 4, <u>destungt</u> <u>Schungsgichnet</u>, daß die Positionen, an weithen die aberen Kanton (4b) der Schundsten (4) mit den entsprochenden Fall Instigen (10, 1b) verteunsten Mitt. nätte dam Verschild (3) angeordnet sind.
- 6. Varietiren zur Herstellung eines Beutele wie in elnom der Ansprüche 1 ble 9 definiert, glederch meimpossiones, des es folgende Verminonsschiffte united: Abrolon einer Aube Folis (20) für die Foli-orizale (1s, 1b) mit einer thermoschüsiven Schicht (100) und Erzeugen eines Paares von veribat ge-trennten Follanteilen (1s. 1b), wobel die Usamogdhishen Schichten (10e) einender zugenernet einet; Abreiten einer Pale Clohibinder (8), jovente verze-han mit einem weitsichen Prefit (3e) bizw. einem est mint lichen Profil (3b) eines Behnappverschlusses (12), websi das Welsiche Profil (82) und das männ-liche Profil (80) missinander im Eingriff sind, Austr-Eingriff-Gringen des weblichen Profile (32) und des mennichen Profize (22) und in-Verlauf-Bringen der 39 gepsetten Dichtbänder (8) zwiechen und perellet zu den verilleri getranntan Pollentellan (1a, 1b); Eindetzen chas Paarse von Salgmation (4), elle demit gatatat eind, das ete otean V-formigen Quescohnit zeigen, Ekitechen eines der Foliantalie (16, 15) und 65 des enterminante der Dichtpänder (8) in einer Richtung dust zur Laufschlung der Folgentale (1s. 10): positions/filisigo Einstellung der oberen Kanten (46) der eingesetzten Seitenfelben (4) reistly zu dem Verschall (3) an den Diehtbündern (6) und Verbinden dieser mit dem betrettenden Follsmittel (ia, 1b) mitob des bazüglichen Dichtburdes (B), vishund das gloistreitigen Verbhaens der Seten-laken (4), der Basis-Abschnitz der Dichtbänder (6) und der Follentelle (1s. 15) mielhander, sowie Bo-schneiden der oberen, der unteren und der labera-ion Seben der Pollentelle (18, 18) sich vorbestimmte Oimensionen das Peutais.

Revendications

 Sau muni d'une farmelure (3) de type à encienchemorr en rélette synthétique et réalisé un reliant une paire de repte latéraux (4) repliés vers l'intérieur qu est pour prés unier une seation transversable en torme de Y ellent (usqu'eux teces lanéaises d'un élèmeré de l'un avant (1a) et d'un élément de l'im arnâre (1h) du cae, dario loqual les élémente de film event (1a) et enfère (1b) ent des couches intérieures (1b) franceschées et la paire de repà lateaux (4) a des couches intérieures de repà lateaux (4) a des couches intérieures de repà lateaux (4) a des couches intérieures de repà lateaux (40 à des couches intérieures de film (1a, 1b) et cent repàtés de manière à ce que la surface auditione set tournés vers finitéreur par présente une section tensereres et en forme de V, les bands supérieures (4b) desdits pas tatanux (40) étant reliés à le curiace interieure (10e) de l'un qualicarque des étalments de film avent et embre (1a, 1b) à radia d'un relation de trammantérentes par repart aux couches intérieures (10e) desdits paire de rubane par repart aux couches intérieures (10e) desdits paire repis lateaux (4), carabitris en ce que les nubane (5) sections de l'un profit en ce que les nubane (6) et d'un profit mâte (3b) de la tempezure du type à diretaration (6).

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- See colon is revendication 1, caracteriste an colour testis placed a colitament (6) prosonam une formature (8) ord una chrasture maticouche de couches de récho (8e, 50) eyant des points de fusion citiéments.
- 3. Sec estan la revensionition 1 ou.2, consetérité en ce que les reple intéreux (4) cont dimensionnée de infle certe que les boyds supériours (45) desdite replis totraux (4) cont reliée à l'oleman, de lifm convepondant (12, (13) en des emplocements abués en descous de la termeture (3) sur les nubene de somtement (E).
- 6. Sac solon la leveralization 1 ou 2, caractiérés en co que lesdite replia latéraux (4) cont dimensionnés de table tente que les bords supériouse (40) d'estite replia latéraux (4) cont robée à l'élément de l'im conrespondant (1s, 1b) en des empleoements aiude au-dessus de la farmature (5) sur les robars de sociement (6).
- 5. Cas salon la revondissition à eu 4, essentidrisé en ce çito isolité emplacemente eu niveau disoquele les bade supérieurs (4b) desdite replis biblimer. (4) : cent relies è l'élément de l'am correspondent (1e, 1b) cont située à proximité de l'adite fermeture (3).
- 6. Procédé de bahisation chan sao selon fune quebonque des revendantions 1 à 5, caractificé en sa qu'il compond les érapsa consistent à : dérouter un realizau de film (20) peur les éléments de film (1e, 1b) ayent una coucha cremoschéphie (10b) et prochire une paire crasmants de film (1e, 1b) espanda vortocionest, lacolies ocuches fremoschéphie. (10b) étant en tace les unes des autres ; dénuter un rouleau de rubanc de sectionent appariée (6).

PAGE 2274 · RCVD AT 2417/2006 11:44:31 AM [Eastern Standard Time] · SYRCUSPTO-EFXRF-1() · CHIS:8779308 · CSID:497022570372 · DURATICH (num-ss):10-37

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muris respectivement d'un profil femalle (9e) et d'un profil mélo (80) d'une fermeture du type à en-cienciement (19), ledit profil fermelle (88) et tedit profil mais than into en price I'vn avec ituare; de-grapor le presidiavación (Se) cui presidimallo (Se) el faire 6 en sorto que los rubans de sos tement apparles (8) e general eura et beurppintatut enx étemblis de film (1a, 1b) esperás variestament; instructure paire de reptis tatéraux (4) pliss pour précenter une conten transversels en journe de Vientro un des élénema de life (ia. 1) et un voban conespondus des notes de scelanon (8) dure une disenta-perpandiculaire à la direction dans inquelle efficaperpendiculaire à la direction dans laquelle etélen-dant les éléments de litre (1s, 19); régler rempla-cement des bands aupéneurs (4b) des replès telé-raix (8) rentres per répont à la formanne (8) eur les ribuns de scallement (8) et les refler à rélament de film correspondent (1a, 1b) à raide du rusen de scallement associé (6), tout en reliant en même sempé les replà laidraux (4), les sections de base de des rubans de scallement (2) et sections de base de des rubans de scallement (2) et sections de base des rubans de scallement (2) et se éléments de l'im (1s, 1b) ensemble; et dédeuper la partie supérieu-re, le band et les faces indésites des éléments (8) l'im (1s, 1b) solan des dimensions prédéte minées du sac.

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FIG.1

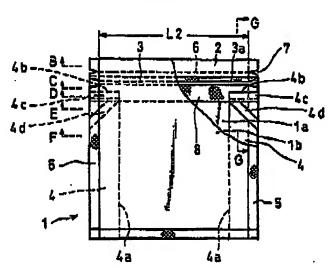
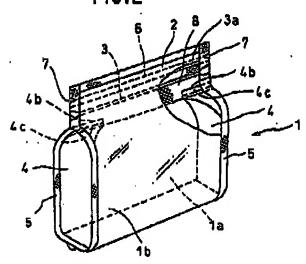


FIG.2



PAGE 2424 'RCVD AT 317/2005 11/4442 AN (Eastern Standard Time) 'SVR-USPTO-EFXIF-157 'DHUS-16720305' CSD: 451072570572' DURATION (prox-s):10-32

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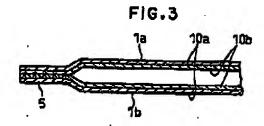
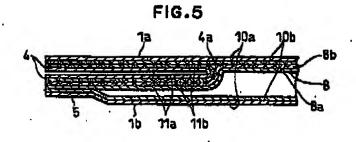
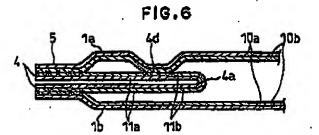


FIG.4



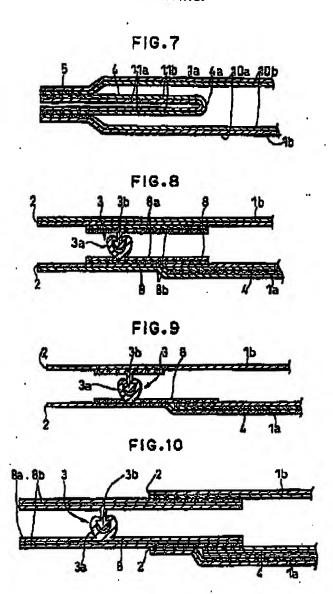


PAGE 2454 RCVD AT 371/2005 11:44:42 AM (Eastern Standard Time) "SVENUSPTO-EFXEF-US" DHIS:8724506" CEID:4482022570572" DURATION (non-sak 10-32

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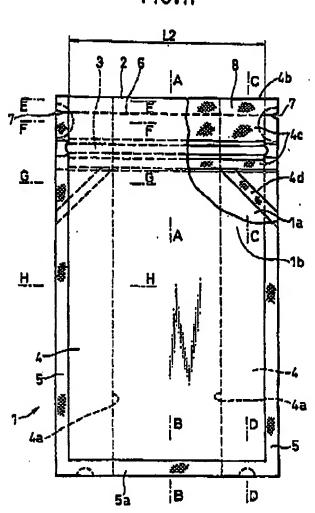
PAGE 2874 * RCVD AT 341/2006 11:44-32 AM (Easkin Standard Time) * SYR-USPTO-EFARF-U3 * CAID: 8729304 * CSID: 4491022570372 * OURATION (min-ss):10-37

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FIG.11



PAGE 27/14 * RCVD AT 3417/2005 15:AA:42 AM (Eastern Standard Time) * SVR-USPTO-EFXRF-U1 * CAUS: 1729308 * CSID:+H92022570372 * CURATION (purk-ss): 10-32

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FIG.12

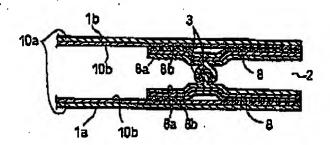


FIG.13

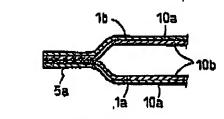
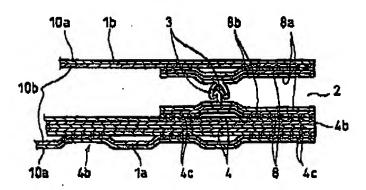


FIG.14



PAGE 2834 "ROVO AT 347/2005 11:44:42 AM (Eastern Standard Time) "SYRJUSPTO-EFXRF-1(1)" CNES-8726405" CSID:-412022574072" OVRATICH (page-68):18-32

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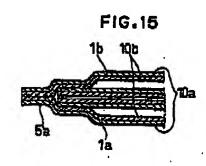
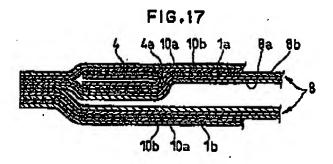


FIG.16



PAGE 2954 'ROYD AT 317/2005 11:44:42 AM (Eastern Standard Time) 'SVR/USPTO-EFXEF-83' CHOS:8729308' CSID:4492072510372' CUTATION (num-ss):18-32

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FIG.18

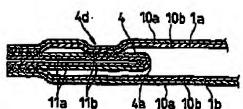
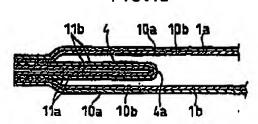


FIG.19

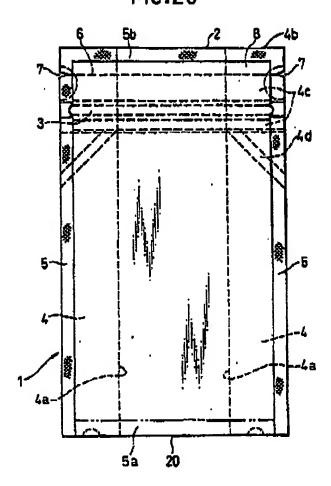


PAGE 1974 ' ROYD AT 341/2005 11;44/42 AN Eastern Standard Time! "EVR-USPTO-EFXEF-10" ONE-072906" CSD;4432022570072" DURATION (min-se):16-32

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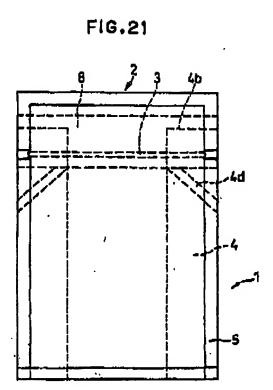
FIG.20



PAGE SIGN ' ROYD AT 341/2005 (1:44:42 AM [Eastern Standard Time] ' SYRUSPTO-EFXEF-163 ' OMIS:8724504' CSID: 445/022570372' DURATION (min-ss):10-32

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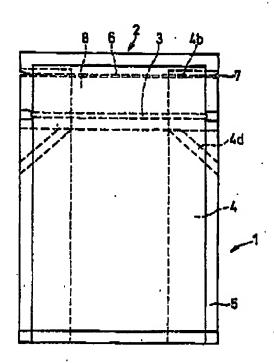


PAGE 3204 ROYD AT 21/1/2015 \$1:44:42 AM (Eastern Standard Time) * SYRAUSPTO EFXEF-(1) * DHIS:8729308 * CSID:4432072570577 * DURATION (num-est 10-32

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FIG.22



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FIG.23

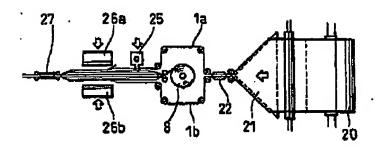
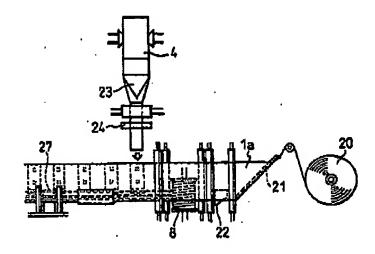


FIG.24



PAGE JACA " RCVD AT 217/2005 11:44:42 AM (Eastern Standard Time) " SVRJUSPTO-EFXRE-LD" CNUS:872/516" CSEC:4492022570772" DURATION (minus):10-32

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